

CPC**COOPERATIVE PATENT CLASSIFICATION****B27K**

PROCESSES, APPARATUS OR SELECTION OF SUBSTANCES FOR IMPREGNATING, STAINING, DYEING, BLEACHING OF WOOD OR SIMILAR MATERIALS, OR TREATING OF WOOD OR SIMILAR MATERIALS WITH PERMEANT LIQUIDS, NOT OTHERWISE PROVIDED FOR ([applying liquids or other fluent materials to surfaces in general B05](#) ; [coating wood or similar material B44D](#)); **CHEMICAL OR PHYSICAL TREATMENT OF CORK, CANE, REED, STRAW OR SIMILAR MATERIALS**

B27K 1/00

Damping wood

B27K 1/02

. Apparatus

B27K 3/00

Impregnating wood, { e.g. impregnation pretreatment, for example puncturing; Wood impregnation aids not directly involved in the impregnation process } ([dyeing, staining B27K 5/00](#))

B27K 3/002

. { [employing compositions comprising micro-organisms](#) }

B27K 3/005

. { [employing compositions comprising microparticles](#) }

B27K 3/007

. { [employing compositions comprising nanoparticles](#) }

B27K 3/02

. Processes; Apparatus

B27K 3/0207

.. { [Pretreatment of wood before impregnation](#) }

B27K 3/0214

... { [Drying \(drying in general F26B \)](#) }

B27K 3/0221

... { [Pore opening \(B27K 3/0214 takes precedence \)](#) }

B27K 3/0228

.. { [Spraying apparatus, e.g. tunnels](#) }

B27K 3/0235

.. { [Stationary devices on or in legs or poles](#) }

B27K 3/0242

.. { [using melt impregnation](#) }

B27K 3/025

.. { [Controlling the process](#) }

B27K 3/0257

.. { [using rods or tablets, or ampoules, e.g. inserted in pre-drilled cavities](#) }

B27K 3/0264

.. { [using staples or nails](#) }

B27K 3/0271

.. { [Vapour phase impregnation](#) }

B27K 3/0278

.. { [involving an additional treatment during or after impregnation](#) }

B27K 3/0285

... { [for improving the penetration of the impregnating fluid](#) }

B27K 3/0292

... { [for improving fixation \(B27K 3/0285 takes precedence \)](#) }

B27K 3/04

.. [Impregnating in open tanks](#)

B27K 3/06

.. [Sap stream methods](#)

B27K 3/08

.. [Impregnating by pressure, { e.g. vacuum impregnation }](#)

B27K 3/083

... { [along the fibers, i.e. longitudinal impregnation](#) }

B27K 3/086

... { [using supercritical or high pressure fluids](#) }

- B27K 3/10 . . . Apparatus
- B27K 3/105 { Injection apparatus }
- B27K 3/12 . . Impregnating by coating the surface of the wood with an impregnating paste
- B27K 3/14 . . Bandage methods
- B27K 3/15 . . Impregnating involving polymerisation { including use of polymer-containing impregnating agents (macromolecular compounds derived from lignocellulosic materials [C08H](#) ; compositions of lignin-containing materials [C08L 97/02](#)) }

NOTE

1. When classifying in group [B27K 3/15](#), classification is additionally made in the groups of subclass M08L for defining the chemical polymeric structure
2. In groups [B27K 3/16](#) to [B27K 3/50](#), in the absence of an indication to the contrary, impregnating agents are classified in the last appropriate place

- B27K 3/153 . . . { Without in-situ polymerisation, condensation, or cross-linking reactions }
- B27K 3/156 . . . { Combined with grafting onto wood fibres }

- B27K 3/16 . Inorganic impregnating agents
- B27K 3/163 . . { Compounds of boron }
- B27K 3/166 . . { Compounds of phosphorus }
- B27K 3/18 . . Compounds of alkaline earth metals
- B27K 3/20 . . Compounds of alkali metals or ammonium
- B27K 3/22 . . Compounds of zinc or copper
- B27K 3/24 . . Compounds of mercury
- B27K 3/26 . . Compounds of iron, aluminium, or chromium
- B27K 3/28 . . Compounds of arsenic or antimony
- B27K 3/30 . . Compounds of fluorine
- B27K 3/32 . . Mixtures of different inorganic impregnating agents

- B27K 3/34 . Organic impregnating agents { (polymers [B27K 3/15](#)) }
- B27K 3/343 . . { Heterocyclic compounds }
- B27K 3/346 . . { Grafting onto wood fibres ([B27K 3/156](#) takes precedence; macromolecular compounds derived from lignocellulosic materials [C08H](#)) }
- B27K 3/36 . . Aliphatic compounds
- B27K 3/38 . . Aromatic compounds { ([B27K 3/343](#) takes precedence) }
- B27K 3/40 . . . halogenated
- B27K 3/42 . . . nitrated, or nitrated and halogenated
- B27K 3/44 . . Tar; Mineral oil
- B27K 3/46 . . . Coal tar
- B27K 3/48 . . . Mineral oil
- B27K 3/50 . . Mixtures of different organic impregnating agents

- B27K 3/52 . Impregnating agents containing mixtures of inorganic and organic compounds

B27K 5/00 Treating of wood not provided for in groups [B27K 1/00](#), [B27K 3/00](#)

- B27K 5/0005 . { Cryogenic treatment }
- B27K 5/001 . { Heating }
- B27K 5/0015 . { by electric means }
- B27K 5/002 .. { Electric discharges, plasma }
- B27K 5/0025 . { by magnetic fields }
- B27K 5/003 . { by using electromagnetic radiation or mechanical waves ([infra-red heating of wood B27K 5/001](#)) }
- B27K 5/0035 .. { Electron beam-radiation }
- B27K 5/004 .. { Gamma-radiation }
- B27K 5/0045 .. { X-rays }
- B27K 5/005 .. { Laser-light }
- B27K 5/0055 .. { Radio-waves, e.g. microwaves }
- B27K 5/006 .. { Vibrations }
- B27K 5/0065 .. { Ultrasonic treatment }
- B27K 5/007 . { using pressure ([B27K 3/08](#) takes precedence) }
- B27K 5/0075 .. { Vacuum }
- B27K 5/008 .. { Supercritical or high pressure fluids }
- B27K 5/0085 . { Thermal treatments, i.e. involving chemical modification of wood at temperatures well over 100°C }
- B27K 5/009 .. { using a well-defined temperature schedule }
- B27K 5/0095 . { by employing wrappers }
- B27K 5/02 . Staining or dyeing wood { ([wood staining compositions C09D 15/00](#)) }; Bleaching wood ([bleaching wood pulp D21C 9/10](#))
- B27K 5/04 . Combined bleaching or impregnating and drying of wood
- B27K 5/06 . Softening or hardening of wood
- B27K 5/065 .. { Hardening }
- B27K 7/00** **Chemical or physical treatment of cork** ([mechanical working of cork B27J 5/00](#))
- B27K 9/00** **Chemical or physical treatment of reed, straw, or similar material** ([mechanical working of cane or the like B27J 1/00](#))
- B27K 9/002 . { Cane, bamboo }
- B27K 9/005 . { Reed }
- B27K 9/007 . { Straw }

B27K 2200/00 **Wooden materials to be treated**

- B27K 2200/10 . Articles made of particles or fibres consisting of wood or other lignocellulosic material
([wood composite materials made of particles or fibres B27N](#))
- B27K 2200/15 . Pretreated particles or fibres
- B27K 2200/30 . Multilayer articles comprising wood ([multilayered products B32B](#))

B27K 2240/00 **Purpose of the treatment**

- B27K 2240/10 . Extraction of components naturally occurring in wood, cork, straw, cane or reed
([solvent extraction B01D 11/00](#))
- B27K 2240/15 . Decontamination of previously treated wood ([decontamination in general A62D 3/00](#))
- B27K 2240/20 . Removing fungi, molds or insects ([biocidal compositions A01N](#) ; [sterilization or disinfection of wood A61L](#))
- B27K 2240/30 . Fireproofing ([fireproofing materials in general C09K 21/00](#))
- B27K 2240/50 . Ageing
- B27K 2240/60 . Improving the heat-storage capacity
- B27K 2240/70 . Hydrophobation treatment
- B27K 2240/90 . UV-protection